

ABSTRACT OF THE DISCLOSURE

A system for performing hybridization assays comprises a cartridge for housing a flow through device, where the cartridge includes a test fluid chamber for facilitating a substantially uniform flow of a test fluid mixture through the flow through device, and

5 a fluidics station to deliver the test fluid mixture to the cartridge. The cartridge has a chip holder that holds the flow-through device, which has an array of microchannel passages. The chip holder has a support for placement of the flow though device, the test fluid chamber for directing a substantially uniform flow of a test fluid mixture through the array of microchannel passages of the flow through device, and a first port

10 that receives the test fluid mixture. The cartridge has a sealing system for preventing the leakage of the test fluid around the flow through device. The test fluid chamber is defined in part by a spade-like surface having an inlet for the test fluid mixture.